

AMENDED CLAIMS

Claims 1-8 (Cancelled)

9.(New) A method for controlled closing of a threaded end of a container with a threaded cap, the method comprising:

moving said container to a cap feeding station and placing the threaded cap on the threaded end of said container;

moving said container with said cap to a closing station, and screwing said cap onto said threaded end of said container for a predetermined number of rotations or a selected rotation time;

detecting, during the cap screwing step, the instant value of the torque applied to said cap and comparing said instant value with at least one pre-selected threshold torque value; and,

determining if a correct closure of said container has occurred in relation to reaching or exceeding said selected threshold torque value near the end of the predetermined rotation or near the end of the selected rotation time, incorrect closure determined if the threshold torque value is not reached or if the threshold torque value is reached before substantial completion of the predetermined rotations or substantially before the selected time has elapsed.

10.(New) A method as claimed in claim 9, wherein detecting the instant torque value includes converting said instant torque value into an electric signal and sending said electric signal to a control unit.

11.(New) A device used for controlled closing of a threaded end of a container with a threaded cap, the device comprising:

chuck means for retaining, with friction, a threaded cap to be placed on the threaded end of the container;

motor means connected to said chuck means for rotating said chuck means and said threaded cap in a direction for screwing said cap onto said container, the motor means set to complete a predetermined number of rotations or to operate for a selected rotation time;

torque detecting means situated between said motor means and said chuck means for measuring an instant value of a torque applied to said cap during rotation of the chuck means; and

a control unit connected to said torque detecting means, the control unit receiving said instant torque value and comparing the instant torque value with a selected threshold value, the control unit determining if a correct closure of said container has occurred in relation to reaching or exceeding said selected threshold torque value near the end of the predetermined rotations or near the end of the selected rotation time, the control unit signaling an incorrect closure if the threshold torque value is not reached or if the threshold torque value is reached before substantial completion of the predetermined rotations or substantially before the selected time has elapsed.

12.(New) A device as claimed in claim 11 wherein said torque detecting means include a torque transducer, connected to a shaft of said motor means and to a stem of said chuck means, the instant value of the torque applied to said cap converted into a corresponding electric signal which is transmitted to said control unit.

13.(New) A device as claimed in claim 11 wherein said motor means is a position controlled electric motor

14.(New) A device as claim 11 wherein said motor means is a brushless induction motor.